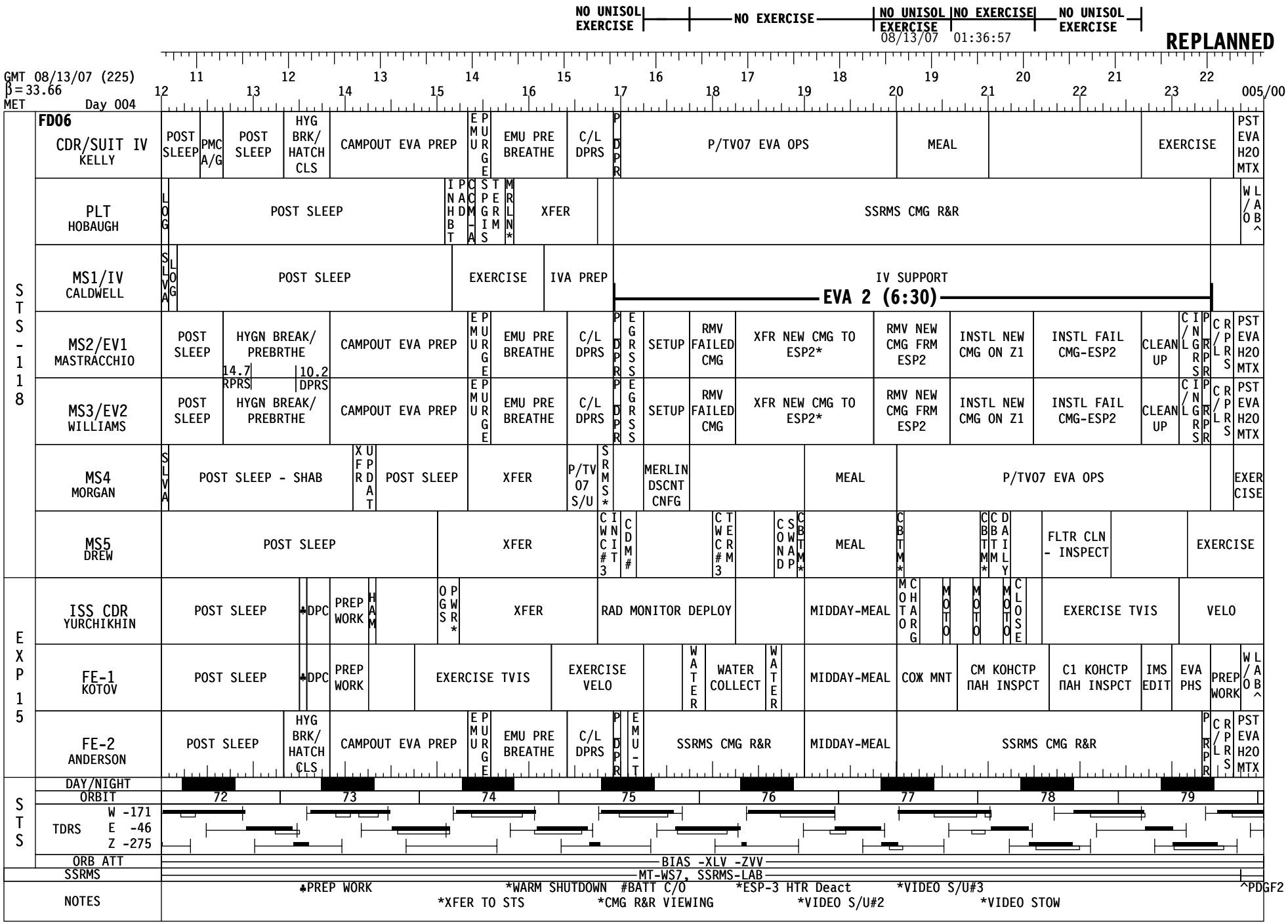
STS-118 / 13A.1

FD 06 Execute Package

MSG	Page(s)	Title
049	1 - 2	FD06 Summary Timeline **(pdf)**
050A	3 - 12	FD06 Flight Plan Revision **(pdf)**
051	13 - 14	FD06 Mission Summary **(pdf)**
052	15 - 16	FD06 Transfer Message **(pdf)**
053	17	Updated Water Ops Cue Card **(pdf)**
054	18 - 19	FD07 Educational PAO Event Summary **(pdf)**
055	---	FD05 MMT Summary **(pdf - Electronic Only)**
033	20 - 27	New EMU Water Recharge Procedure **(pdf)**

Approved by FAO: *Roger Smith*

Last Updated: Aug 13 2007 8:20AM GMT
JEDI *(**J**oint **E**xecute package **D**evelopment and **I**ntegration), v2.04.0003*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NO EXERCISE
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NO UNISOL EXERCISE
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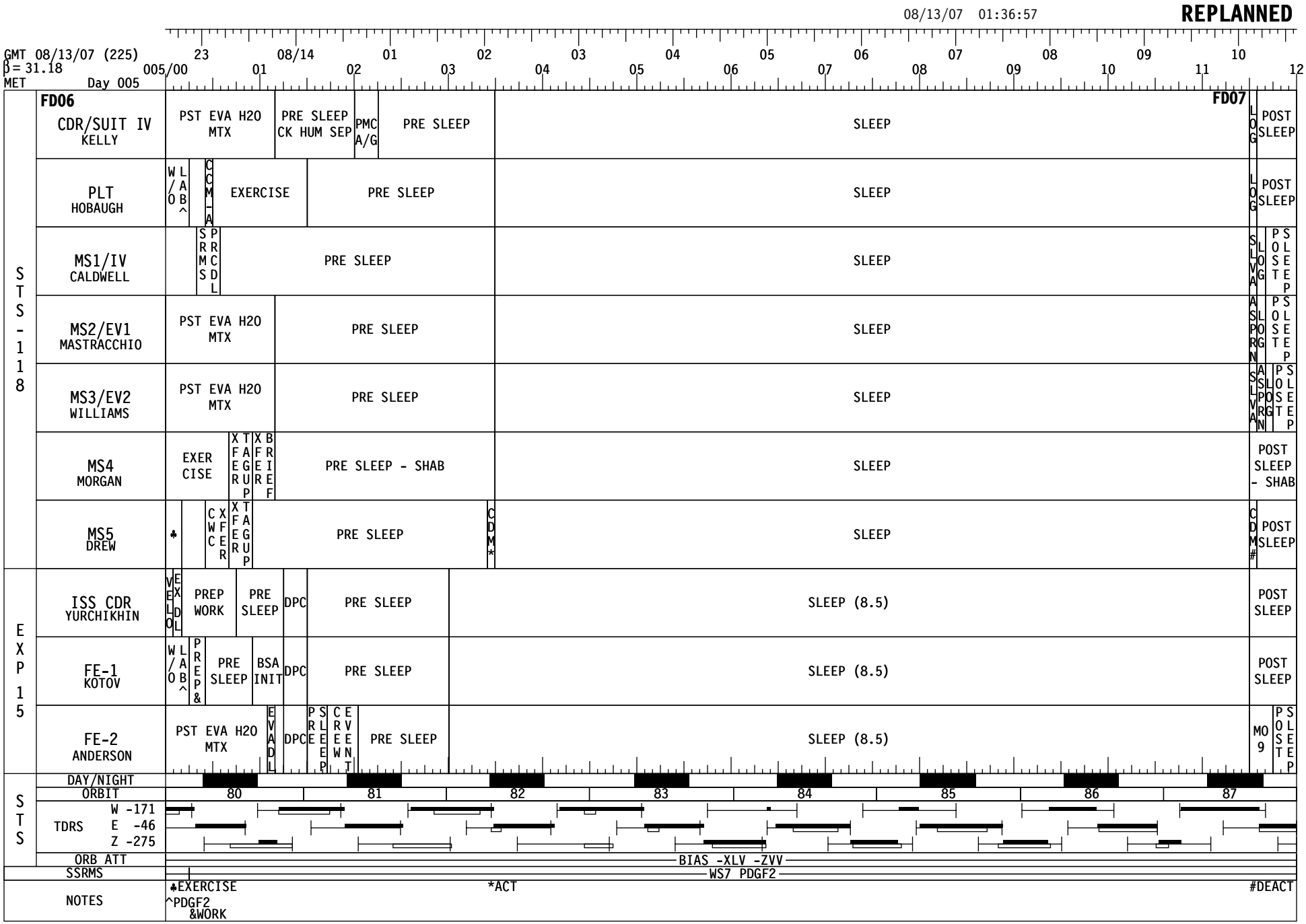
REPLANNED
GMT 08/13/07 (225)
β = 33.66
MET Day 004
005/00
STS-118
EXP 15
STS
FD06
CDR/SUIT IV KELLY
PLT HOBAUGH
MS1/IV CALDWELL
MS2/EV1 MASTRACCHIO
MS3/EV2 WILLIAMS
MS4 MORGAN
MS5 DREW
ISS CDR YURCHIKHIN
FE-1 KOTOV
FE-2 ANDERSON
EVA 2 (6:30)
14.7 RPRS
10.2 DPRS
DAY/NIGHT
ORBIT
TDRS W -171 E -46 Z -275
ORB ATT
BIAS -XLV -ZVV
SSRMS
MT-WS7, SSRMS-LAB
NOTES
♣PREP WORK
*WARM SHUTDOWN
#BATT C/O
*ESP-3 HTR Deact
*VIDEO S/U#3
^PDGF2
*XFER TO STS
*CMG R&R VIEWING
*VIDEO S/U#2
*VIDEO STOW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005/00
08/14
FD06
FD07
STS-118
EXP 15
CDR/SUIT IV KELLY
PLT HOBAUGH
MS1/IV CALDWELL
MS2/EV1 MASTRACCHIO
MS3/EV2 WILLIAMS
MS4 MORGAN
MS5 DREW
ISS CDR YURCHIKHIN
FE-1 KOTOV
FE-2 ANDERSON
PST EVA H2O MTX
PRE SLEEP CK HUM SEP
PMC A/G
PRE SLEEP
SLEEP
LOG
POST SLEEP
W/O
LAB^
CMA
EXERCISE
SRMS
PRCDL
SLVA
ASPORN
EXER CISE
XFER
TAGUP
XFER
BRIEF
PRE SLEEP - SHAB
POST SLEEP - SHAB
CWC
CDM*
CDM#
VELO
EXDL
PREP WORK
PRE SLEEP
DPC
SLEEP (8.5)
PREP&
BSA INIT
EVADL
PRESLEEP
CREWNT
MO9
DAY/NIGHT
ORBIT
80
81
82
83
84
85
86
87
STS
TDRS
W -171
E -46
Z -275
ORB ATT
BIAS -XLV -ZVV
SSRMS
WS7 PDGF2
NOTES
♣EXERCISE
^PDGF2
&WORK
*ACT
#DEACT

MSG INDEX

MSG NO.	TITLE
049	FD06 Summary Timeline
050	FD06 Flight Plan Revision
051	FD06 Mission Summary
052	FD06 Transfer Message
053	Updated Water Ops Cue Card
054	FD07 PAO Event Summary
055	FD05 MMT Summary

1. For today's cryo config, Tank Sets 1 and 5 will be active with dual heaters.

   R1 CRYO O2, H2 MANF VLV TK1 (two) - OP (tb-OP)

2. We just wanted to send a friendly reminder from DPS:

   Please make sure that you leave IDPs ON for at least 20 seconds prior to powering OFF. This is a lifetime issue for the heads on the hard drive of the IDP. Thanks.

3. Please update procedure 1.300 SSRMS CMG R&R EVA SUPPORT:
   Step 10: WR joint angle at the APFR Egress position
   WAS:
   +12.5
   IS:
   -12.5

4. We have re-printed MSG 033 to be used Post EVA for all EVAs. Please maintain this in the ISS Airlock.

5. The table below summarizes the Shuttle and ISS exercise constraints for today. These constraints are also noted in your timelines for your reference.

Activity	Exercise Constraints	
	Shuttle	ISS
EVA 2	No exercise during EVA	-No unisolated exercise during EVA -No exercise during failed CMG removal from Z1, new CMG install on ESP-2, and new CMG install on Z1

6. There are no SPACEHAB viewport violations for FD06.

7. Silver biocide kit S/N 1001 should contain 4 unused syringes needed for CWC fills starting on FD8. The expected location is in the Overhead Mesh Bag (ISS NOD1P2 Mesh Bag). Verify the current location of this kit. If the kit is not in the expected location, report to MCC-H.

8. For routing Video using a PCS do not use buttons labeled ORB. This is a possible cause of the CC1 failure. Houston is available to route video between the vehicles as you desire or you can route the video yourselves but do not use the ORB video sources/destinations on the PCSs. Note that this feature applies to all PCS including the AFD.

   Rationale
   Upon inspection of the trouble shooting data brought down after the CC1 failure we found a video auto route command issued from the CUP PCS 4 seconds before the CC transitioned to diagnostics. This command requested
   Video source – Orbiter Channel 2
   Video Destination – CUP Monitor 3

   In a previous version of CCS, routing a video source or destination that did not exist caused the C&C to transition to Diagnostics. When CCS R6 was loaded last month a new version of PCS was also loaded that added the ORB 1 and ORB 2 video source buttons. Previously these sources were labeled VTR/ORB because the Orbiter video goes through the VTR. When NODE 2 is installed on 10A, video equipment will be available to make ORB 1 and ORB 2 valid video sources and the VTR source will no longer be used to get Orbiter video.

   That is even though the ORB 1 and ORB2 buttons are available on the PCS, those sources do not actually exist. To route Orbiter Video you need to use the VTR source.

   This information was uncovered late in the day and we have not yet had time to verify this is actually the cause of the C&C failure. To be conservative at this juncture however, especially with another EVA scheduled today, we want to inform you of this possible cause.

9. REPLACE PAGES 2-18, 2-20, AND 3-56 THROUGH 3-63.

STS-118 FD06

GMT Date 08/13 (225) | TDRS W E Z | DORB | ORB | MET Day 004 | STS ATTI

GMT: 11:00, 12:00, 13:00, 14:00
MET: 12:00, 13:00, 14:00, 15:00, 16:00
DORB: 15, 16, 1
ORB: 72, 73, 74
STS ATTI: BIAS -XLV -ZVV

CDR KELLY

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

PRIVATE MEDICAL CONFERENCE
Perform via PRIVATE A/G 2

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

EVA SYS: 2.315 HYGIENE BREAK
Steps 21-30

NOTE: MCC-H performs Step 24

EVA SYS: 2.320 10.2 PSIA CAMPOUT
EVA PREP
In Step 1.3, perform only
A7 WIRELESS VID HTR - ON

EVA SYS: 1.220 EMU PURGE

EVA SYS: 1.225 EMU PREBREATHE

PLT HOBAUGH

FLIGHT SLEEP LOG(ORB OPS, SDBI)
POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

EVA2 INHIBIT PAD
(EVA, TIMELINES)
Ref. MSG 043, Item 1

CCM-A STATUS CK(PL OPS, CCM-A)
SPEGIS CANISTER TERM
(PL OPS, MERLIN/SPEGIS)

MERLIN WARM SHUTDOWN(PL OPS, MERLIN/SPEGIS)

TRANSFER
Ref. Transfer List & MSG 052

MS1 CALDWELL

SALIVA COLLECT(ORB OPS, SDBI)
FLIGHT SLEEP LOG(ORB OPS, SDBI)
POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

EXERCISE

Notes

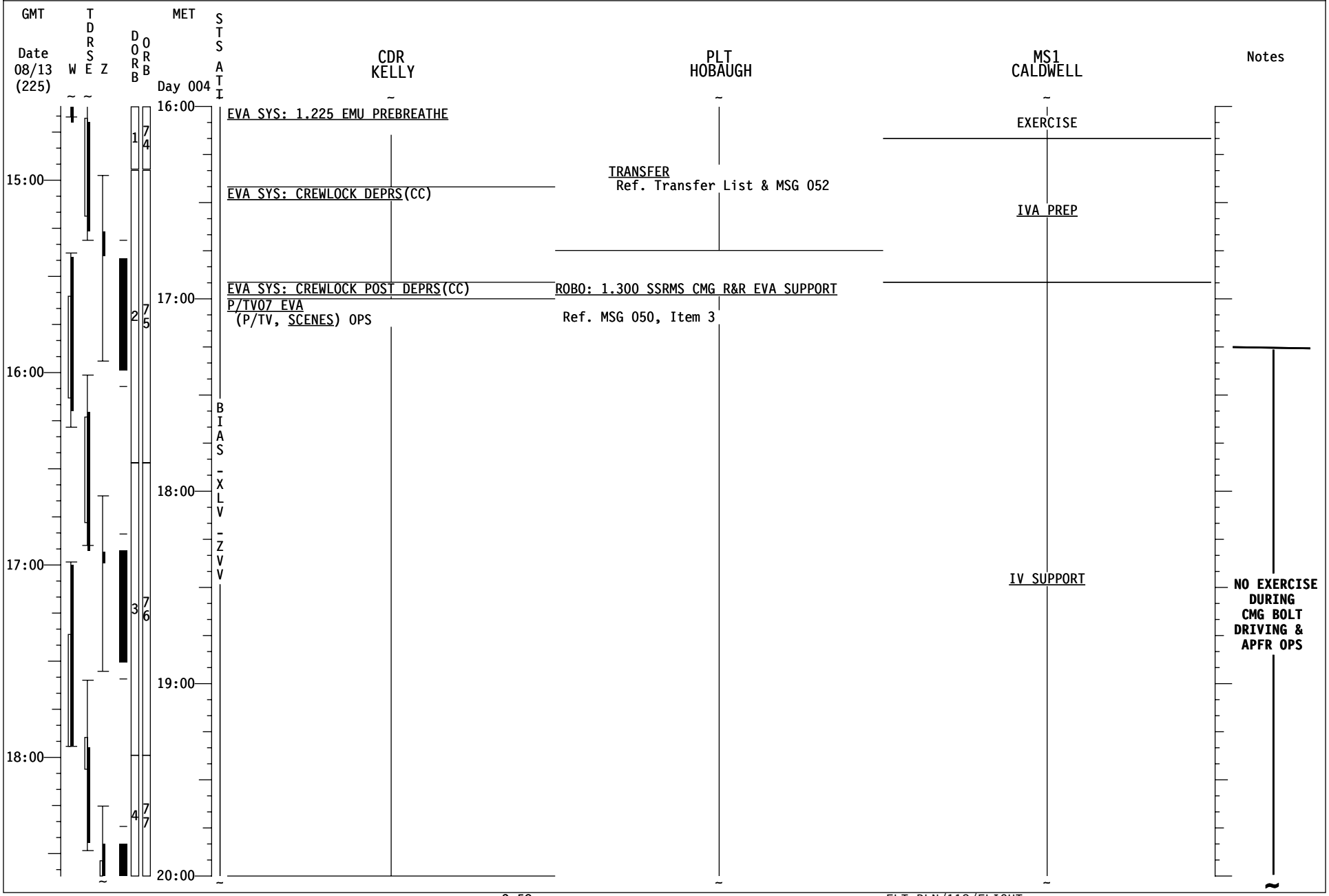
FD06 EZ ACTIVITES
TEPC(STATUS CHECK)
(ORB OPS, CREW SYS)Step A6
OCAC Filter Inspect
Hard Reboot PGSCs (Except WLES & WORLDMAP)

STS-118 FD06

GMT Date 08/13 (225) | MET Day 004 | TDRS W E Z | DOB 15 16 | ORB 72 73 74 | STS ATI BIAS_XLV_ZVV

MS2 MASTRACCHIO	MS3 WILLIAMS	MS4 MORGAN	MS5 DREW	Notes
POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	SALIVA COLLECT(ORB OPS, SDBI) POST-SLEEP ACTIVITY (ORB OPS, CREW SYS) SH POST-SLEEP CONFIG (SH OPS, ON-ORBIT)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	
EVA SYS: 2.315 HYGIENE BREAK Note: Start no earlier than 8:40 hrs from end of 2.305 10.2 PSIA CAMPOUT MASK PREBREATHE MCC-H performs Steps 1-4, 16-20, & 24	EVA SYS: 2.315 HYGIENE BREAK Note: Start no earlier than 8:40 hrs from end of 2.305 10.2 PSIA CAMPOUT MASK PREBREATHE MCC-H performs Steps 1-4, 16-20, & 24			
EVA SYS: 2.320 10.2 PSIA CAMPOUT EVA PREP In Step 1.3, perform only A7 WIRELESS VID HTR - ON	EVA SYS: 2.320 10.2 PSIA CAMPOUT EVA PREP In Step 1.3, perform only A7 WIRELESS VID HTR - ON	DAILY TRANSFER LIST UPDATE Ref. MSG 052 POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)		
EVA SYS: 1.220 EMU PURGE	EVA SYS: 1.220 EMU PURGE	TRANSFER Ref. MDDK Xfer List: Items 401, 401.14-401.17, 438.12 SH Xfer List: Items 627, 632-633,637,638,628, 629,630,636,164-171, 173-177,179-180 Ref. MSG 052	TRANSFER Ref. Transfer List & MSG 052	
EVA SYS: 1.225 EMU PREBREATHE	EVA SYS: 1.225 EMU PREBREATHE			

STS-118 FD06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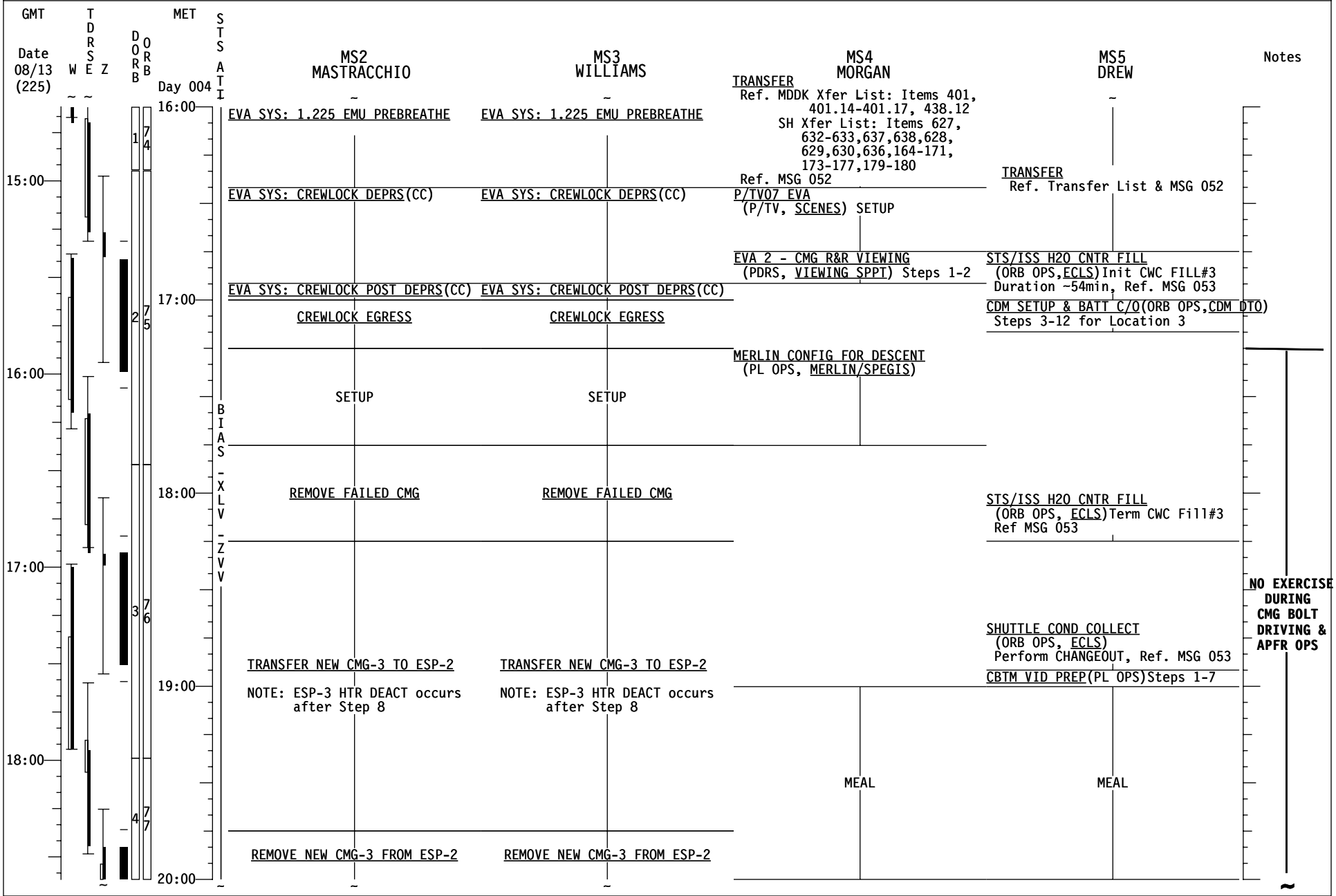
Date
08/13
(225)
W
TDRS E
Z
DOB
ORB
MET
Day 004
STS ATI
CDR
KELLY
PLT
HOBAUGH
MS1
CALDWELL
Notes
16:00
15:00
17:00
16:00
18:00
17:00
19:00
18:00
20:00
1
2
3
4
74
75
76
77
EVA SYS: 1.225 EMU PREBREATHE
EVA SYS: CREWLOCK DEPRS(CC)
EVA SYS: CREWLOCK POST DEPRS(CC)
P/TVO7 EVA
(P/TV, SCENES) OPS
TRANSFER
Ref. Transfer List & MSG 052
ROBO: 1.300 SSRMS CMG R&R EVA SUPPORT
Ref. MSG 050, Item 3
EXERCISE
IVA PREP
IV SUPPORT
BIAS -XLV -ZVV
NO EXERCISE DURING CMG BOLT DRIVING & APFR OPS

STS-118 FD06


GMT
Date
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(225)
W
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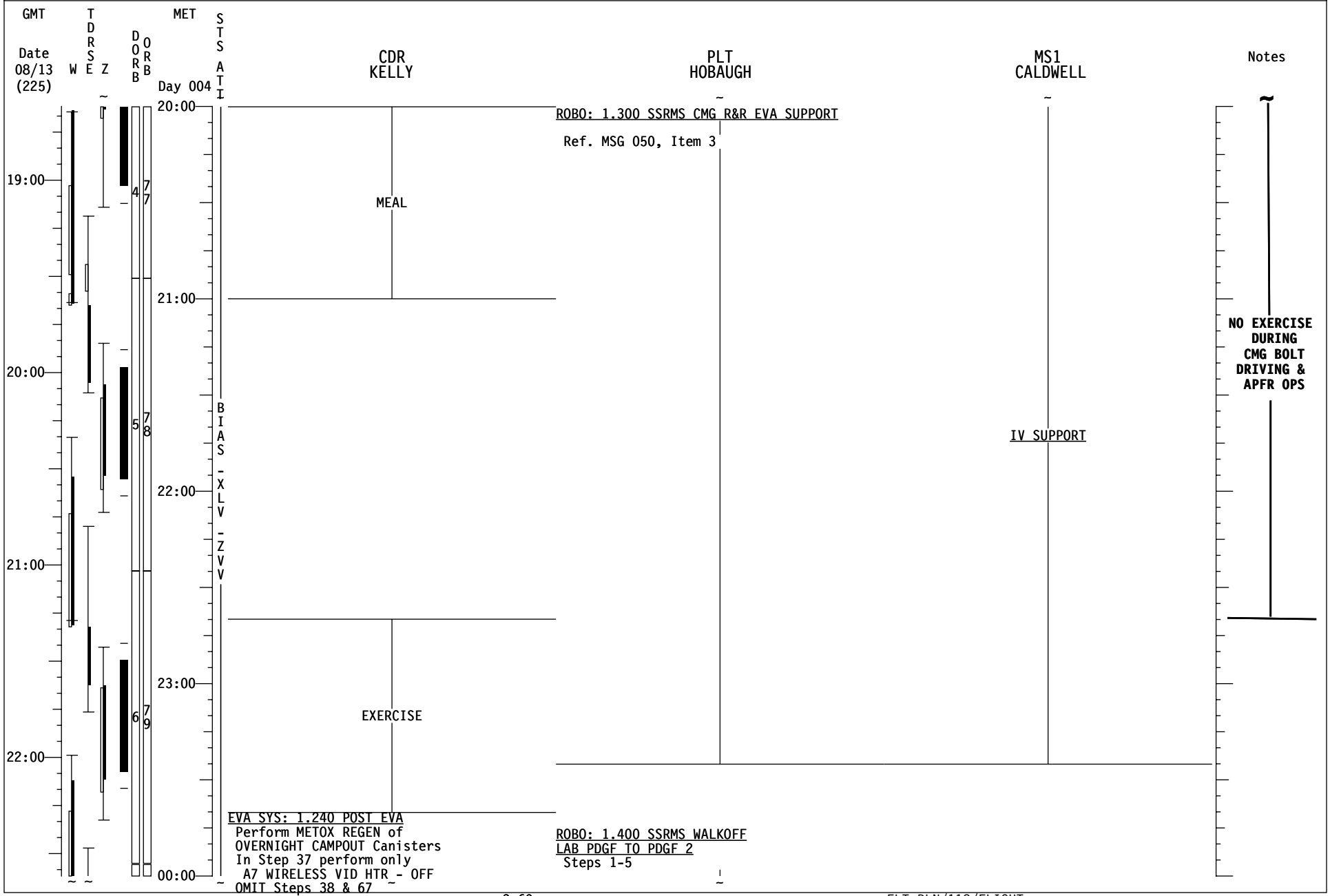
DOR B
ORB
MET
Day 004
STS ATI
MS2
MASTRACCHIO
MS3
WILLIAMS
MS4
MORGAN
MS5
DREW
Notes
16:00
15:00
17:00
16:00
17:00
18:00
19:00
18:00
20:00
BIAS -XLV -ZVV
1
2
3
4
74
75
76
77
EVA SYS: 1.225 EMU PREBREATHE
EVA SYS: 1.225 EMU PREBREATHE
TRANSFER
Ref. MDDK Xfer List: Items 401, 401.14-401.17, 438.12
SH Xfer List: Items 627, 632-633,637,638,628, 629,630,636,164-171, 173-177,179-180
Ref. MSG 052
TRANSFER
Ref. Transfer List & MSG 052
EVA SYS: CREWLOCK DEPRS(CC)
EVA SYS: CREWLOCK DEPRS(CC)
P/TVO7 EVA
(P/TV, SCENES) SETUP
EVA 2 - CMG R&R VIEWING
(PDRS, VIEWING SPPT) Steps 1-2
STS/ISS H2O CNTR FILL
(ORB OPS,ECLS)Init CWC FILL#3
Duration ~54min, Ref. MSG 053
EVA SYS: CREWLOCK POST DEPRS(CC)
EVA SYS: CREWLOCK POST DEPRS(CC)
CREWLOCK EGRESS
CREWLOCK EGRESS
CDM SETUP & BATT C/O(ORB OPS,CDM DTO)
Steps 3-12 for Location 3
MERLIN CONFIG FOR DESCENT
(PL OPS, MERLIN/SPEGIS)
SETUP
SETUP
REMOVE FAILED CMG
REMOVE FAILED CMG
STS/ISS H2O CNTR FILL
(ORB OPS, ECLS)Term CWC Fill#3
Ref MSG 053
NO EXERCISE DURING CMG BOLT DRIVING & APFR OPS
SHUTTLE COND COLLECT
(ORB OPS, ECLS)
Perform CHANGEOUT, Ref. MSG 053
CBTM VID PREP(PL OPS)Steps 1-7
TRANSFER NEW CMG-3 TO ESP-2
NOTE: ESP-3 HTR DEACT occurs after Step 8
TRANSFER NEW CMG-3 TO ESP-2
NOTE: ESP-3 HTR DEACT occurs after Step 8
MEAL
MEAL
REMOVE NEW CMG-3 FROM ESP-2
REMOVE NEW CMG-3 FROM ESP-2

STS-118 FD06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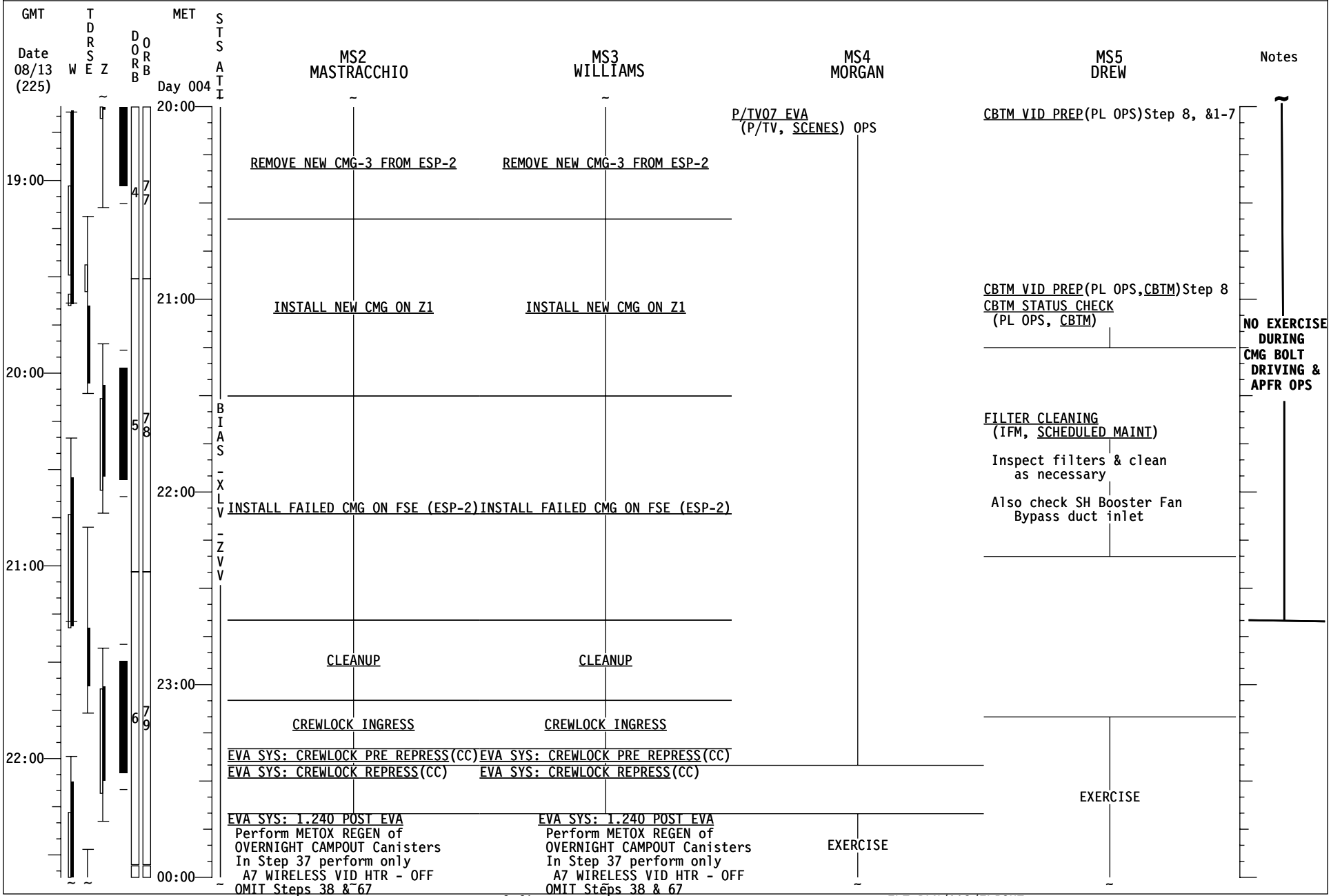
TDRS Z
DOB 4
DOB 5
DOB 6
ORB 77
ORB 78
ORB 79
MET
Day 004
STS ATI
BIAS -XLV -ZVV
19:00
20:00
21:00
22:00
23:00
00:00
CDR
KELLY
MEAL
EXERCISE
PLT
HOBAUGH
ROBO: 1.300 SSRMS CMG R&R EVA SUPPORT
Ref. MSG 050, Item 3
ROBO: 1.400 SSRMS WALKOFF
LAB PDGF TO PDGF 2
Steps 1-5
MS1
CALDWELL
IV SUPPORT
Notes
NO EXERCISE DURING CMG BOLT DRIVING & APFR OPS
EVA SYS: 1.240 POST EVA
Perform METOX REGEN of
OVERNIGHT CAMPOUT Canisters
In Step 37 perform only
A7 WIRELESS VID HTR - OFF
OMIT Steps 38 & 67
In Steps 39 & 52, use MSG 033

STS-118 FD06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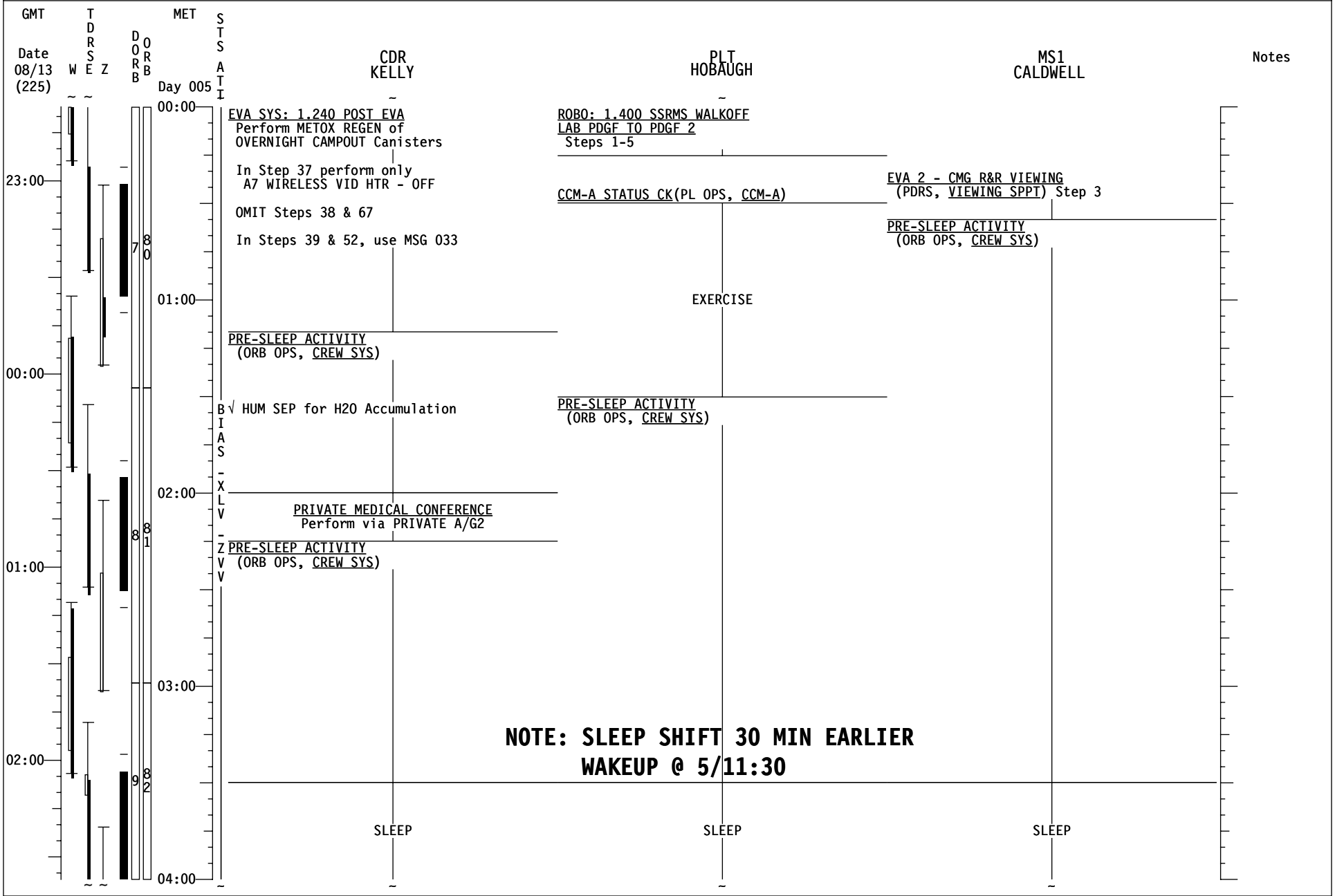
7 9
BIAS -XLV -ZVV
MS2
MASTRACCHIO
MS3
WILLIAMS
MS4
MORGAN
MS5
DREW
Notes
REMOVE NEW CMG-3 FROM ESP-2
REMOVE NEW CMG-3 FROM ESP-2
INSTALL NEW CMG ON Z1
INSTALL NEW CMG ON Z1
INSTALL FAILED CMG ON FSE (ESP-2)
INSTALL FAILED CMG ON FSE (ESP-2)
CLEANUP
CLEANUP
CREWLOCK INGRESS
CREWLOCK INGRESS
EVA SYS: CREWLOCK PRE REPRESS(CC)
EVA SYS: CREWLOCK REPRESS(CC)
EVA SYS: CREWLOCK PRE REPRESS(CC)
EVA SYS: CREWLOCK REPRESS(CC)
EVA SYS: 1.240 POST EVA
Perform METOX REGEN of
OVERNIGHT CAMPOUT Canisters
In Step 37 perform only
A7 WIRELESS VID HTR - OFF
OMIT Steps 38 & 67
In Steps 39 & 52, use MSG 033
EVA SYS: 1.240 POST EVA
Perform METOX REGEN of
OVERNIGHT CAMPOUT Canisters
In Step 37 perform only
A7 WIRELESS VID HTR - OFF
OMIT Steps 38 & 67
In Steps 39 & 52, use MSG 033
P/TV07 EVA
(P/TV, SCENES) OPS
EXERCISE
CBTM VID PREP(PL OPS)Step 8, &1-7
CBTM VID PREP(PL OPS,CBTM)Step 8
CBTM STATUS CHECK
(PL OPS, CBTM)
FILTER CLEANING
(IFM, SCHEDULED MAINT)
Inspect filters & clean
as necessary
Also check SH Booster Fan
Bypass duct inlet
EXERCISE
NO EXERCISE DURING CMG BOLT DRIVING & APFR OPS

STS-118 FD06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Day 005
STS ATI
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KELLY
PLT
HOBAUGH
MS1
CALDWELL
Notes
00:00
01:00
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03:00
04:00
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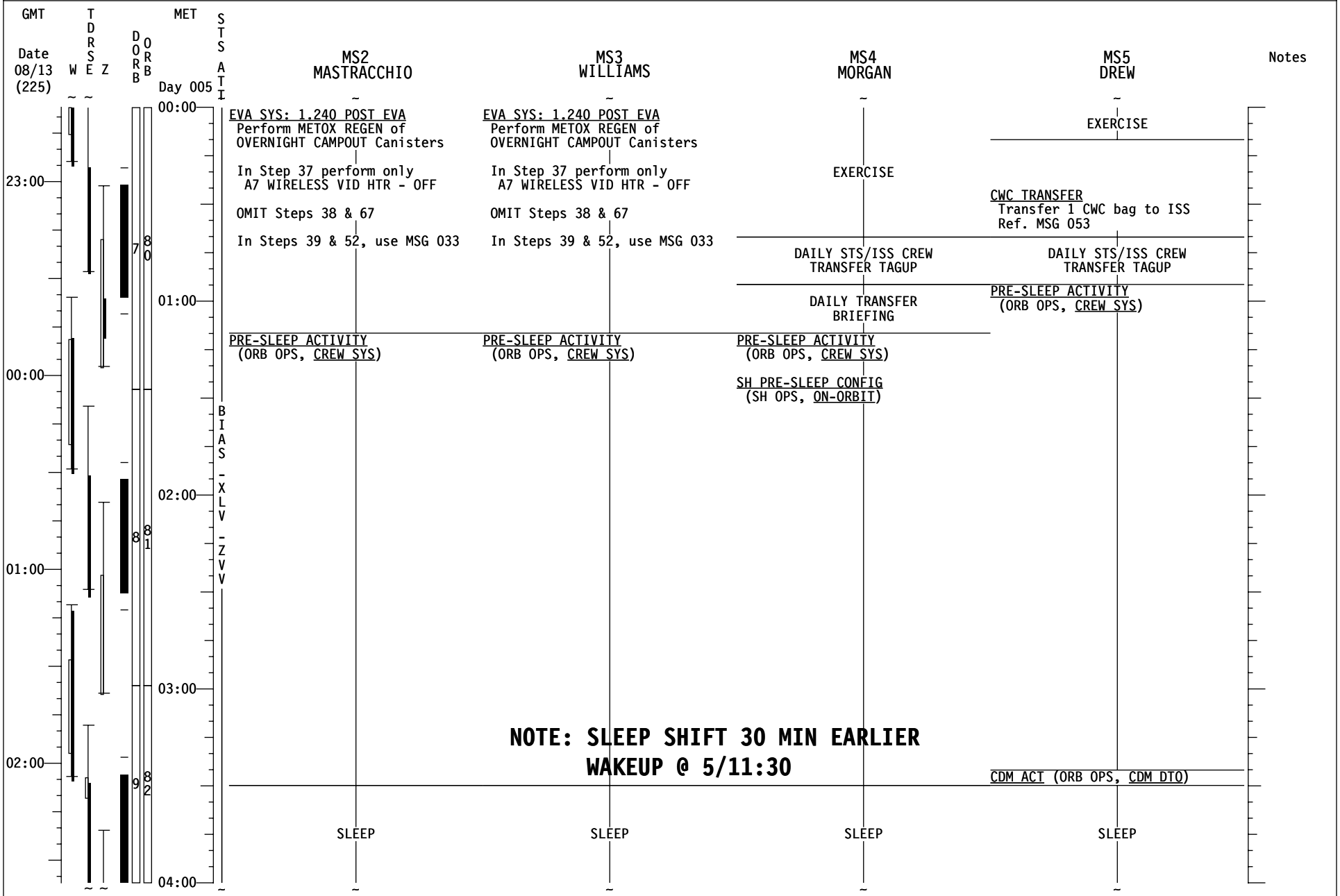
02:00
EVA SYS: 1.240 POST EVA
Perform METOX REGEN of
OVERNIGHT CAMPOUT Canisters
In Step 37 perform only
A7 WIRELESS VID HTR - OFF
OMIT Steps 38 & 67
In Steps 39 & 52, use MSG 033
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
B√ HUM SEP for H2O Accumulation
BIAS-XLV-ZVV
PRIVATE MEDICAL CONFERENCE
Perform via PRIVATE A/G2
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
SLEEP
ROBO: 1.400 SSRMS WALKOFF
LAB PDGF TO PDGF 2
Steps 1-5
CCM-A STATUS CK(PL OPS, CCM-A)
EXERCISE
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
SLEEP
EVA 2 - CMG R&R VIEWING
(PDRS, VIEWING SPPT) Step 3
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
SLEEP
NOTE: SLEEP SHIFT 30 MIN EARLIER
WAKEUP @ 5/11:30

STS-118 FD06


GMT
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08/13
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DOB
ORB
MET
Day 005
STS ATI
MS2
MASTRACCHIO
MS3
WILLIAMS
MS4
MORGAN
MS5
DREW
Notes
00:00
01:00
02:00
03:00
04:00
23:00
00:00
01:00
02:00
EVA SYS: 1.240 POST EVA
Perform METOX REGEN of
OVERNIGHT CAMPOUT Canisters
In Step 37 perform only
A7 WIRELESS VID HTR - OFF
OMIT Steps 38 & 67
In Steps 39 & 52, use MSG 033
EVA SYS: 1.240 POST EVA
Perform METOX REGEN of
OVERNIGHT CAMPOUT Canisters
In Step 37 perform only
A7 WIRELESS VID HTR - OFF
OMIT Steps 38 & 67
In Steps 39 & 52, use MSG 033
EXERCISE
EXERCISE
CWC TRANSFER
Transfer 1 CWC bag to ISS
Ref. MSG 053
DAILY STS/ISS CREW
TRANSFER TAGUP
DAILY STS/ISS CREW
TRANSFER TAGUP
DAILY TRANSFER
BRIEFING
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
SH PRE-SLEEP CONFIG
(SH OPS, ON-ORBIT)
NOTE: SLEEP SHIFT 30 MIN EARLIER
WAKEUP @ 5/11:30
CDM ACT (ORB OPS, CDM DTO)
SLEEP
SLEEP
SLEEP
SLEEP
BIAS-XLV-ZVV
7
8
9
80
81
82

Good Morning Endeavour!

Yesterday proved that you are certainly a "well-focused" crew! Thanks for such a super inspection job!

We are looking forward to supporting today's EVA!

YOUR CURRENT ORBIT IS: 186 x 183 NM

NOTAMS:

EDW – EDWARDS: RWY 15/33 ELS ONLY. RWY 18L NOT USABLE.
NOR – NORTHRUP: ALL RWYS ARE RED – WET.
YHZ – HALIFAX: RWY 14/32 CLOSED DAILY 1130Z-2100Z 13 AUG TO 17 AUG.
RWY 23 THDL DISPLACED 1,200' 1130Z-2100Z 13 AUG TO 17 AUG.
NKT – CHERRY POINT: RWY 14R/32L CLOSED 13 AUG TO 16 SEP.
MRN – CLOSED TO DOD OPERATIONS 1900Z TO 0259Z DAILY.
WAK – WAKE ISLAND: CLOSED DUE TO RECONSTRUCTION.
YYR – GOOSE BAY: RWY 08/26 CLOSED. 16/34 AVAILABLE.
ZZA – ZARAGOZA: INSTALLING MOBILE NATO BARRIER.
IKF – KEFLAVIK: NO AGREEMENT FOR USE.
AWG – RIO GALLEGOS: NO AGREEMENT FOR USE.

NEXT 2 PLS OPPORTUNITIES:

EDW22 ORB 79 – 4/23:16 (FEW120 SCT250 220/12P19; 2ND OPP: SCT250 220/14P24)
EDW22 ORB 95 – 5/23:39 (SCT100 SCT250 230/15P23)

OMS TANK FAIL CAPABILITY:

L OMS FAIL: YES (SHALLOW TARGETS)
R OMS FAIL: YES (SHALLOW TARGETS)

LEAKING OMS PRPLT BURN:

L OMS LEAK: BURN OUT-OF-PLANE AN+77 <= TIG <= AN+26
OTHERWISE BURN RETROGRADE
R OMS LEAK: BURN OUT-OF-PLANE AN+78 <= TIG <= AN+26
OTHERWISE BURN RETROGRADE

OMS QUANTITIES(%)
L OMS OX = 45.9 R OMS OX = 44.9
FU = 46.0 FU = 44.9

SUBTRACT I'CNCT COUNTER FOR CURRENT OMS QUANTITIES

DELTA V AVAILABLE:

OMS	437 FPS
ARCS (TOTAL ABOVE QTY1)	37 FPS
TOTAL IN THE AFT	474 FPS
ARCS (TOTAL ABOVE QTY2)	67 FPS
FRCS (ABOVE QTY 1)	33 FPS
AFT QTY 1	84 %
AFT QTY 2	46 %

THERE ARE NO FAILURE/IMPACT/WORK AROUNDS FOR TODAY

Good morning Barb, Al & Dave,

Great to talk to you yesterday Al. Thanks for the calldown. There are a open questions we are still tracking and we've listed them below. You are approximately 24% complete with SH transfers and 50% complete with MDDK transfers. There are NO updates for either Transfer List books today. Woohoo! However, we decided to uplink a new electronic file so you can see how we've reflected the completed items and temp stowed items.

For STS, the Transfer List Excel file, FD06_TransferList_STS118.xls, is located on the KFX machine in **C:\OCA-up\transfer**.

For ISS, the Transfer List Excel file, FD06_TransferList_STS118.xls, is located in **K:\OCA-up\transfer**.

How's SH looking? Hopefully you can get the 5MLE bags packed up for return today.

Q&As:

Q: Item 9 (IVA Pin Kit): Please verify if kit was stowed in 0.5 CTB (s/n 1202) or in 1.0 CTB (s/n 1096) in NOD1O4_D1.

Q: Item 800 (Pliers to ISS) and item 720 (Pliers from ISS): Please confirm if these mddk items are complete.

Q: Item 184/743 (3.0 from Anita Air Flushing Unit): Please confirm if this empty 3.0 CTB has been relabeled as 743.

Q: Item 420 (Returning ISIS Stowage Dwr): Please let us know when this item is stowed in return bag 729 (prestaged 3.0 CTB at NOD1O1).

A: Just FYI - You called down two items as stowed not per the TL yesterday (Item 152 at LAB1D3 and item 103 at NOD1O1). The FD02 Transfer Message requested you to Pen and Ink the 'stowage at undock' for these items to the locations you called down yesterday. Please review the transfer messages from FD02 through FD05 to verify the Pen and Ink updates have been incorporated. Of course if you'd prefer to just swap pages, let us know.

For today – FD06 Choreography

Middeck

- Items 401.14-401.17 (Oleg): Pack CHeCS water samples into Return Bag 401 after WATER COLLECT activity
- Items 438.12 (Fyodor): Pack old RAMS into Return Bag 438 after RAD MONITOR DEPLOY

Spacehab

- Item 627: Pack 5MLE launched at AP04 with IELK; strap at AP04
  - Add foam (2 pieces) from banisters in 5MLE bag
- Items 632-633: Pack 5MLE launched at **AP01** with coldbags; **strap at AS01**
- Items 637, 638, 628, 629: Pack 5MLE launched at **AS01** with return items; **strap at AP01**

  - EMCH
  - Flight Calibration Assy
- Items 630, 636: Pack 5MLE launched at AS03 with return items; strap at AS03
  - Sunshade
  - CBM Disk Cover
- Transfer remaining resupply items from fwd bulkhead
- Remove and temp stow SF rack front trays (20 min)
- Items 164-171, 173-177, 179-180: Begin transferring resupply items from SF rack to ISS
  - (Al) Transfer new IEU CTB and Ziplock for returning IEU to ISS; use foam/ziplock to configure old IEU for return. Stow old IEU CTB at AC01

For tomorrow - FD07 Choreography

Middeck

- Items 33, 34: Transfer items from Bag C to ISS.

Spacehab

- Items 607-609, 639, 640, 730, 747: Pack up MESS rack for return
  - Stow old scratch pane in MESS Rack after Lab Window Scratch Pane R&R
- Reinstall PF rack front trays (60 min)
- Item 434.30 (Fyodor/Oleg): Pack HRM Chest Straps for return after last FD7 exercise ops
- Items 164-182 (remaining items): continue transferring SF rack items to ISS
- Transfer remaining resupply from Aft bulkhead to ISS.
  - Item 109: MAINTENANCE HARDWARE 1.0 CTB from AC15 for FD11 DAUI Troubleshooting
  - Install ANITA Interferometer in locker in lab

Please call with questions.

- The Transfer Team

STS-118 Water Ops Cue Card

FLIGHT DAY 6

CWC Fill #3 - Technical (Green Label)

Pick from CWC's in ISS NOD1P2 Mesh Bag
Use syringes from Biocide Kit S/N 1005 in MF28M
- ☐ Biocide Only
- ☐ Sample Reqd, Stow sample in MF28M
- ☐ Report S/N to MCC
- ☐ Verify Green label in CWC window
- ☐ Verify Green decal to CWC end
- ☐ Verify CWC S/N on end decal
- ☐ Transfer to NOD1P2 (Water Wall)

Condensate Changeout

Condensate CWC S/N 5037 in MF28M
- ☐ Temp stow full Cond CWC S/N 5053
  Will be emptied on FD7
- ☐ Connect Y-Y hose to CWC S/N 5037
- ☐ Label "Condensate" using Gray Tape

FLIGHT DAY 7

CWC Fill #4 - Technical (Green Label)

Pick from CWC's in ISS NOD1P2 Mesh Bag
Use syringes from Biocide Kit S/N 1005 in MF28M
- ☐ Biocide Only
- ☐ No Sample Reqd
- ☐ Report S/N to MCC
- ☐ Verify Green label in CWC window
- ☐ Verify Green decal to CWC end
- ☐ Verify CWC S/N on end decal
- ☐ Transfer to NOD1P2 (Water Wall)

Water Dump

Waste Water Tank
4 PWR's S/N 1013, 1023, 1018, 2002
1 Condensate CWC S/N 5053
Details for this dump will be provided in the FD7 Flight Plan

OGS PWR Fill #1 (Purple Label)

PWR S/N 2002 temp stowed on Middeck near Galley following FD7 Water Dump
- ☐ Verify Purple Label in PWR window
- ☐ Transfer to ISS A/L1D1_B2

FLIGHT DAY 8

CWC Fill #5 - Technical (Green Label)

Pick from CWC's in ISS NOD1P2 Mesh Bag
Use Biocide Kit S/N 1001 in ISS NOD1P2 Mesh Bag
- ☐ Biocide Only
- ☐ No Sample Reqd
- ☐ Report S/N to MCC
- ☐ Verify Green label in CWC window
- ☐ Verify Green decal to CWC end
- ☐ Verify CWC S/N on end decal
- ☐ Temp stow Biocide Kit in NOD1P2 Mesh Bag
- ☐ Transfer to NOD1P2 (Water Wall)

PWR Fill #3 (White Label)

PWR S/N 1023 temp stowed on Middeck near Galley following FD7 Water Dump
- ☐ Verify White Label in PWR window
- ☐ Transfer to ISS A/L1D1_A1

PWR Fill #4 (White Label)

PWR S/N 1018 temp stowed on Middeck near Galley following FD7 Water Dump
- ☐ Verify White Label in PWR window
- ☐ Transfer to ISS A/L1D1_A2

Water Dump Notes:
Contingency Cross Tie (WCS):
- Potable QD only used for PWR Dump
- Waste QD used for CWC Dump

Hoses:
- Use Y-Y Hose from CHCK (Window Shade Bag) and WWD Filter from BOB Locker (MF28E) for CWC Overboard Dump
- Use B-B Hose with R-Y Adapter from CHCK (Window Shade Bag) from PWR Dump-Supply Line

PWR Fill Notes:
- Do not pull drink water from Galley during PWR Fill.
- Do not detach PWR (EMU H2O Recharge Bag) QD restraint during PWR operations.
- Do not overfill as the PWR could leak.

Stowage

Potable CWC's available in STBD 1 Floor 1 Bag C
☐ 1080 ☐ 1081

Technical CWC's available on ISS in Mesh Bag above NOD1P2 (Water Wall)
☐ 1074 ☐ 1076
☐ 1035 ☐ 1072

Condensate CWC's available on Shuttle/SHAB
☐ 5053 (Launched in MA16D)
☐ 5037 (Launched in SHAB FC11)

PWR's available on ISS for EVA
☐ 1023 ☐ 1018 ☐ 1013

PWR's available on ISS for OGS
☐ 2002

Water Kits:	Launch
Biocide Kit S/N 1005 (4 syr.)	SH FP10
Biocide Kit S/N 1001	NOD1P2 Mesh Bag
Biocide Kit S/N 1007 **	M-02 Bag S/N 1026
Mineral Kit S/N 1002	STBD Floor 1 Bag C
Sample/Purge Kit S/N 1005	SHAB FC11

** Do not use this kit for CWC Fills

COLOR LEGEND

Brown	CWC Condensate Water
Green	CWC Technical Water
Blue	CWC Potable Water
Purple	PWR Water for US OGS
White	PWR Water for ISS EVA

Discovery Center of Idaho, Boise, ID
Educational PAO Event Summary Message / Sequence of Voice Calls

Date:	FD 7 - Tuesday, August 14, 2007
Start Event:	05/22:33 MET / 2109 GMT / 4:09 pm CT / 3:09 pm MT Orbit 94, TDRW
Duration:	20 min.
Location:	U.S. Destiny Laboratory
Participants:	*Flight Crew:* STS-118 Mission Specialists Barbara Morgan, Dave Williams, and Alvin Drew; Expedition 15 Flight Engineer Clay Anderson *Ground:* Science Educator Kevin Collins and local area school children
Anticipated Topics:	1. Please see list of questions included after the voice protocols.
Notes:	1. TV required on Shuttle KU-Band downlink, with audio on A/G-2. 2. Check Endeavour / ISS geographical location before event. 3. Check correct mic placement for optimal audio. **4. Please expect an audio delay of up to five seconds between your answers, the students' receipt of your answers, and the next question.**

Shuttle Capcom:	Endeavour / ISS, this is Houston. Are you ready for the event?
Endeavour / ISS:	Houston, this is Endeavour / ISS. We are ready.
Shuttle Capcom:	Discovery Center of Idaho, this is Houston. Please call Endeavour/ ISS for a voice check.
Discovery Center:	Endeavour / ISS, this is Kevin Collins at the Discovery Center of Idaho. How do you hear me?
Endeavour / ISS:	(reports voice quality. If acceptable…) We are ready for questions.
Discovery Center:	(Kevin Collins offers opening remarks, then students conduct question and answer session, then…)
Endeavour / ISS:	(Crew offers final thanks, then . . .)
Houston ACR:	Endeavour / ISS, this is Houston ACR. That concludes the event.
Shuttle Capcom:	Thank you, Discovery Center of Idaho. Endeavour/ ISS, we are now resuming operational Air-to-Ground communications.

Time may not permit all of the questions to be asked.

1. If you threw a baseball in space, how fast would it go? (Sarah Avery)
2. When you were a kid, did you ever think about becoming an astronaut? (Cosette “Coko” Roberts)
3. What is it like when you first enter space and you are weightless? (Jordan Hill)
4. What types of exercise equipment and regimen are you using to prevent bone loss? (Brooke Thomas)
5. If you had an extra day in space, how would you use it? (Andrew Donelick)
6. What would do you have to do to prepare for a space walk (EVA)? (Ashellina Benson)
7. How does the crew get clean air in the shuttle? (Madison Escarziga)
8. How does being a teacher relate with being an astronaut on this mission? (Sarah Blum)
9. Could you demonstrate how you drink in space? (Falyn Henry)
10. Can you see the effects of global warming from space? (Frank Walline)
11. Does the sun’s heat cause any problems during an EVA? (Zhu Jun “Z.J.” Mayton)
12. What is the most challenging part about manipulating the robotic arm? (Elisha Mabey)
13. What do stars look like from where you are? (Paige Dashiell)
14. Can you see the earth rotate when you are orbiting? (Gavin Tosten)
15. What are your responsibilities for this mission? (Hunter Frye)
16. How did you train to prepare for microgravity? (Zakkary Schirmeister)
17. What was the hardest thing you had to accomplish to prepare for this mission? (Corey Nielson)
18. What was the most interesting aspect of going through the astronaut training? (Colton Smith)
19. How do you prepare to go into space? (Zhu Jun “Z.J.” Mayton)
20. How were you selected to do a spacewalk? (Elisha Mabey)

15-0738 (MSG 033) EMU WATER RECHARGE WITH ADDED DATA (1.506 BASELINE)

(25 Minutes)
(30 Minutes if setting up CWC)

OBJECTIVE:

Recharge EMU feedwater tanks with iodinated water from EMU Water Recharge Bag Payload Water Reservoir (PWR). A small quantity is then dumped from the feedwater tanks to provide ullage for condensate collection during the next EMU prebreathe. Due to recent fill pressure issues, additional data is to be recorded and reported by the crew.

INITIATE (15 MINUTES)

MCC-H/IV 1. POWERING ON UHF 1(2) RADIO

PCS

If powering on UHF 1

Perform {2.701 UHF 1 ORU ACTIVATION}, all (SODF: C&T: NOMINAL: UHF), then:

If powering on UHF 2

Perform {2.703 UHF 2 ORU ACTIVATION}, all (SODF: C&T: NOMINAL: UHF), then:

E-Lk 2. Unstow designated EMU Water Recharge Bag (PWR) from floor bin.

CAUTION

PWRs should be inspected for gas bubbles prior to connecting them to the IRU to avoid introducing gas into the EMU feedwater tanks. If a significant quantity of gas is observed, a PWR de-gas may be required.

PWR 3. Unzip restraint bag to access bladder.
In Table 0, record approximate visual quantity of H2O and gas bubbles.
Zip restraint bag closed.

A/L1F2 4. Attach bag to wall below IRU.

IRU 5. EMU Water Recharge Bag →|← H2O IN Port

6. √H2O outlet vlv (rotary) – CLOSED

If EMUs not powered

7. POWERING UP EMUs

UIA 7.1 √sw PWR EV-1,2 (two) – OFF
√PWR EV-1,2 LEDs (four) – Off
√EMU O2 SUPPLY PRESS gauge: < 950

C-Lk wall 7.2 Remove SCU from stowage straps and pouches.
Transfer SCU to E-Lk.

DCM 7.3 Remove DCM cover.
Attach with Velcro to DCM.

7.4 SCU →|← DCM

√SCU locked

7.5 sw POWER → BATT

CAUTION
EMU must be on BATT power when UIA suit power is turned on.

PSA 7.6 √sw SUIT SELECT (two) – OFF
√sw EMU MODE EMU1,2 (two) – PWR

7.7 sw MAIN POWER → ON

√MAIN POWER LED – On

7.8 sw SUIT SELECT (two) → EMU 1,2

√EMU 1,2 LEDs (two) – On
√EMU 1,2 Volts: 18.0 to 19.0

UIA 7.9 sw PWR EV-1,2 (two) → ON

√PWR EV-1,2 EMU LEDs (two) – On

DCM 7.10 sw POWER → SCU

8. √sw Comm FREQ – LOW

9. sw COMM mode → PRI

10. CONFIGURE EMUs FOR CONTINUOUS EMU DATA
sw DISP → STATUS, until DATA?COMBO displayed

sw DISP → YES (hold for 2 seconds)

sw DISP → STATUS, until DATA EMU? displayed

sw DISP → YES (hold for 2 seconds)

Verify DATA?EMU displayed

sw DISP → STATUS, until H2O WP displayed

sw DISP → YES (hold for 2 seconds)

UIA 11. √WATER EV-1,2 REG vlv (two) – SUPPLY

12. WATER EV-1,2 SUPPLY vlv (two) → OPEN

If PSA Utility Outlet power being used for other applications
13. √**MCC-H** for verification of PSA Utility Outlet power loading

PSA 14. sw IRU/UTILITY POWER → ON

√IRU/UTILITY POWER LED – On
√IRU Volts: 27.0 to 29.0

NOTE
1. The following step powers on the IRU.
2. Be prepared to verify the POWER, PRESS, and TEMP LEDs briefly illuminate when IRU POWER is taken ON. As required, notify **MCC-H** of any missing pixels on QUANTITY display.

IRU 15. sw POWER → ON

√POWER, PRESS, TEMP LEDs (three) – On (at startup)

When 2.5-second LED and pixel check complete
16. √POWER LED remains – On

17a. sw PUMP → ON

17b. **In Table 0**, record IRU Supply Pressure (NOTE: this is expected to be similar to the end of fill pressure.)

18a. H2O outlet vlv (rotary) ↶ EMU SUPPLY, start timer.
In Table 0, record GMT time.

√PUMP LED – On (green)
√QUANTITY display – ↑

****
* If TEMP LED or PRESSURE LED – On (yellow)
* | sw PUMP → OFF
*
* | √**MCC-H**
****

1 minute into recharge elapsed time:
18b. **In Table 0**, record IRU QUANTITY (NOTE: expect ~1lb)

DCM 18c. √STATUS: H2O WP
In Table 0, record EMU1 and EMU2 H2O WP

18d. As comm permits, report Table 0 data to **MCC-H**.

Table 0. Recharge Initiation Data

GMT / HH:MM:SS	**Step 3:** Bag Serial Number	**Step 3:** Approx H2O and Gas Content		**Step 17b:** IRU Supply Pressure	**Step 18b:** IRU QUANTITY	**Step 18c:** STATUS: H2O WP	
		H2O (% full)	Gas (mL)			EMU1	EMU2

TERMINATE (10 MINUTES)

DCM 19. √STATUS: H2O WP, compare with IRU Supply Pressure

If H2O WP ≤ 12.0 psi, Quantity display not ↑, and bag NOT empty

19a. Perform troubleshooting per {15-0739 EMU WATER RECHARGE TROUBLESHOOTING} (SODF: Uplinked Procedures: EVA)

If H2O WP ≤ 12.0 psi, Quantity display not ↑, and bag empty

IRU 19.1 sw PUMP → OFF

19.2 H2O outlet vlv (rotary) ↷ CLOSED

19.3 Record value from IRU Quantity display in Table 1.

Table 1. Payload Water Reservoir Content during Swap

Date	**Step 19.3**: IRU Quantity	**Step 19.6**: Bag Serial Number	**Step 19.6**: Approx H2O and Gas Content	
			H2O (L)	Gas (mL)

19.4 EMU Water Recharge Bag ←|→ H2O IN Port
Stow in E-lk Floor Bin.

E-lk 19.5 Unstow new designated EMU Water Recharge Bag.

19.6 Unzip restraint bag to access bladder.
In Table 1, record approximate visual quantity of H2O and gas bubbles
As comm permits, report Table 1 data to **MCC-H**.
Zip restraint bag closed.

IRU 19.7 EMU Water Recharge Bag →|← H2O IN Port

19.8 Go to step 17.

When H2O WP > 12.0 psi, stable for ~30 seconds, and Quantity display not ↑ (charging complete)

IRU 20a. **In Table 2**, record Supply Pressure gauge reading

DCM 20b. √STATUS: H2O WP, compare with IRU Supply Pressure
In Table 2, record EMU1 and EMU2 H2O WP

UIA 20c. WATER EV-1,2 SUPPLY vlv (two) → CLOSE

IRU 21. sw PUMP → OFF

√PUMP LED – Off

22. H2O outlet vlv (rotary) ↷ CLOSED.

23. **In Table 2**, record value from Quantity display.

24. sw POWER → OFF

√POWER LED – Off

25. EMU Water Recharge Bag ←|→ H2O IN Port

Unzip restraint and inspect bag for water and gas content.
Record on **Table 2**.
Zip restraint bag closed.

26. As comm permits, report Table 2 data to **MCC-H**.

Table 2. Recharge Termination Data

Date	**Step 20a:** IRU Supply P	**Step 20b:** STATUS: H2O WP		**Step 18b:** IRU QUANTITY	**Step 23:** Bag Serial #	**Step 25:** Approx H2O and Gas Content	
		EMU1	EMU2			H2O (% full)	Gas (mL)

A/L1D1 27. Stow bag in floor bin.
As comm permits, report new stowage location to **MCC-H**.

If PSA Utility Outlet power not being used for other applications

PSA 28. sw IRU/UTILITY POWER → OFF

√IRU/UTILITY POWER LED – Off

29. SETTING UP EMU WASTEWATER COLLECTION BAG (5 MINUTES)

29.1 Unstow the following

- ☐ CWC s/n ____ (Waste Water)
- ☐ Yellow Red QD adapters (2)
- ☐ Blue Blue Hose

If required

29.2 Yellow Red QD (2) →|← Blue Blue Hose (one each end)

29.3 Yellow Red QD →|← CWC

UIA 29.4 Yellow Red QD →|← Waste Water Port

Refer to Figure 1 for CWC attachment configuration.

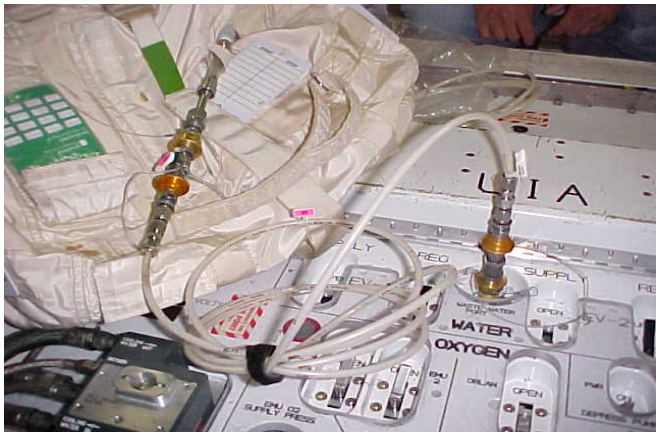

Figure 1.- CWC connected to UIA Waste Water Port.

EMU 30. √Helmet ←|→ HUT

Install SCOF.

√SCOF locked

DCM 31. O2 ACT → IV

UIA 32. √WATER EV-1(2) SUPPLY vlv – CLOSE

> NOTE
> Be prepared to start a 30-second timer for the ullage dump. Steps 33 and 34 should be performed serially for EMU 1 and EMU 2.

33. WATER EV-1(2) REG vlv → WASTE

Wait 30 seconds.

34. WATER EV-1(2) REG vlv → SUPPLY

35. Repeat steps 33 and 34 for other EMU.

DCM 36. O2 ACT → OFF

UIA 37. Yellow Red QD ←|→Waste Water Port

38. Yellow Red QD ←|→CWC

39. Install UIA Waste Water Port Cap

40. Restow CWC, Blue Blue Hose with Yellow Red QDs.

EMU 41. Remove SCOF.
Stow SCOF in EMU Equipment Bag.

DCM 42. sw COMM mode → OFF

43. As required per timeline, go to {1.240 POST EVA} (SODF: ISS EVA SYS: EVA PREP/POST).

or

Go to {1.525 LCVG WATER FILL} (SODF: ISS EVA SYS: EMU MAINTENANCE).

or

Go to step 44.

44. POWERING DOWN EMUs (AS REQUIRED)

DCM 44.1 √sw POWER – SCU

UIA 44.2 sw PWR EV-1,2 (two) → OFF

√PWR EV-1,2 LEDs (four) – Off
√PWR EV-1,2 VOLTS: ~00.0

44.3 OXYGEN EMU 1,2 vlv (two) → CLOSE

PSA 44.4 sw SUIT SELECT (two) → OFF

√SUIT SELECT LEDs (four) – Off

44.5 sw MAIN POWER → OFF

√MAIN POWER LED – Off

DCM 44.6 SCU ←|→ DCM

44.7 Install DCM cover.

C-lk wall 44.8 Insert SCU in stowage pouch.

MCC-H/IV 45. POWERING DOWN UHF 1(2)
PCS If powering off UHF 1
Go to {2.702 UHF 1 ORU DEACTIVATION}, all (SODF: C&T: NOMINAL: UHF).

If powering off UHF 2
Go to {2.704 UHF 2 ORU DEACTIVATION}, all (SODF: C&T: NOMINAL: UHF).